We Claim:

1. A synergistic combination of an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1) or SYYMN (SEQ ID NO: 14), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and

(a) thalidomide or an analog thereof, or

(b) a proteasome inhibitor,

for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

2. A combination according to claim 2, wherein the antibody comprises a variable heavy chain of the sequence QVQLVESGGGLVQPGGSLRLSCAASGFTFSSYYMNWVRQAPGKGLEWVSGISGDPSNTYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVYYCARDLPLVYTGFAYWGQGTLVTVSS (SEQ ID NO: 10) and a variable light chain of the sequence DIELTQPPSVSVAPGQTARISCSGDNLRHYYVYWYQQKPGQAPVLVIYGDSKRPSGIPERFSGSNSGNTATLTISGTQAEDEADYYCQTYTGGASLVFGGGTKLTVLGQ (SEQ ID NO: 11).

3. A combination according claims 1 or 2, wherein the antibody comprises an IgG1 Fc region.

4. A combination according to any one of the preceding claims, wherein the antibody comprises a modified Fc region, wherein said modification enhances ADCC activity.

5. A combination according to any one of the preceding claims, wherein said antibody specific for CD38 and said thalidomide or an analog thereof or a proteasome inhibitor are administered separately.

6. A combination according to any one of the preceding claims, which is able to reduce bone lysis with an at least two-fold better efficacy than lenalidomide and/or bortezomib alone.

7. A combination according to any one of the preceding claims, wherein said antibody specific for CD38 is combined with thalidomide or an analog thereof.

8. A combination according to claim 7, wherein the thalidomide analog comprises lenalidomide.

9. A combination according to any one of the preceding claims, wherein lenalidomide is administered prior to administration of the antibody specific for CD38.

10. A combination according to any one of the preceding claims, wherein lenalidomide is administered at least 72 hours prior to administration of the antibody specific for CD38.

11. A combination according to any one of claims 7-10, which is able to mediate killing of CD38-expressing AMO-1 and/or NCI-H929 cells by ADCC in the presence of isolated human PBMCs with an at least two-fold better efficacy than lenalidomide alone.

12. A combination according to any one of claims 1-6, comprising said antibody specific for CD38 and a proteasome inhibitor.

13. A combination according to claim 12, wherein said proteasome inhibitor is bortezomib.

14. A combination according to claims 12 or 13, which is able to mediate killing of CD38-expressing LP-1 and/or NCI-H929 cells by ADCC in the presence of isolated human PBMCs with an at least two-fold better efficacy than bortezomib alone.

15. A synergistic combination of an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1), an HCDR2 region of sequence

GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and lenalidomide or other thalidomide analog for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

16. A synergistic combination of an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and bortezomib or other proteasome inhibitor for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

We claim:

1. A synergistic combination of:
(i) an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1) or SYYMN (SEQ ID NO: 14), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and
(ii) (a) thalidomide, lenalidomide, or pomalidomide, or (b) a proteasome inhibitor, for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

2. A combination according to claim 1, wherein the antibody comprises a variable heavy chain of the sequence:
QVQLVESGGGLVQPGGSLRLSCAASGFTFSSYYMNWVRQAPGKGLEWVSGISGDPSNTYYADSVKGRFTISRDNSKNTLYLQMNSLRAEDTAVYYCARDLPLVYTGFAYWGQGTLVTVSS (SEQ ID NO: 10)
and a variable light chain of the sequence
DIELTQPPSVSVAPGQTARISCSGDNLRHYYVYWYQQKPGQAPVLVIYGDSKRPSGIPERFSGSNSGNTATLTISGTQAEDEADYYCQTYTGGASLVFGGGTKLTVLGQ (SEQ ID NO: 11).

3. A combination according to claim 1, wherein the antibody comprises an IgG1 Fc region.

4. A combination according to claim 1, wherein the antibody comprises a modified Fc region, wherein said modification enhances ADCC activity.

5. A combination according to claim 1, wherein said antibody specific for CD38 and said thalidomide, lenalidomide, or pomalidomide, or a proteasome inhibitor, are administered separately.

6. A combination according to claim 1, which is able to reduce bone lysis with an at least two-fold better efficacy than lenalidomide and/or bortezomib alone.

7. A combination according to claim 1, wherein the combination comprises thalidomide.

8. A combination according to claim 1, wherein the combination comprises lenalidomide.

9. A combination according to claim 8, wherein lenalidomide is administered prior to administration of the antibody specific for CD38.

10. A combination according to claim 9, wherein lenalidomide is administered at least 72 hours prior to administration of the antibody specific for CD38.

11. A combination according to claim 8, which is able to mediate killing of CD38-expressing AMO-1 and/or NCI-H929 cells by ADCC in the presence of isolated human PBMCs with an at least two-fold better efficacy than lenalidomide alone.

12. A combination according to claim 1, comprising said antibody specific for CD38 and a proteasome inhibitor.

13. A combination according to claim 12, wherein said proteasome inhibitor is bortezomib.

14. A combination according to claim 13, which is able to mediate killing of CD38-expressing LP-1 and/or NCI-H929 cells by ADCC in the presence of isolated human PBMCs with an at least two-fold better efficacy than bortezomib alone.

15. A synergistic combination of:
an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and (ii) lenalidomide, for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

16. A synergistic combination of:
(i) an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ

ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and (ii) pomalidomide, for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.

17. A combination according to claim 1, wherein the combination comprises pomalidomide.

18. A combination according to claim 12, wherein said proteasome inhibitor is carfilzomib.

19. A synergistic combination of:
(i) an antibody specific for CD38 comprising an HCDR1 region of sequence GFTFSSYYMN (SEQ ID NO: 1), an HCDR2 region of sequence GISGDPSNTYYADSVKG (SEQ ID NO: 2), an HCDR3 region of sequence DLPLVYTGFAY (SEQ ID NO: 3), an LCDR1 region of sequence SGDNLRHYYVY (SEQ ID NO: 4), an LCDR2 region of sequence GDSKRPS (SEQ ID NO: 5), and an LCDR3 region of sequence QTYTGGASL (SEQ ID NO: 6) and a thalidomide analog, for use in the treatment of multiple myeloma and/or non-hodgkins lymphoma.